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NOTICE OF ALLOWANCE AND FEE(S) DUE

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01/16/2007

NEEDLE & ROSENBERG, P.C. SUITE 1000 999 PEACHTREE STREET ATLANTA, GA 30309-3915

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| | ID, ROBERT M |
| ART UNIT | PAPER NUMBER |
| 1722 | |

DATE MAILED: 01/16/2007

| 10/650 240 | 09/27/2002 | Andreas Muha | ATTORNET DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |

TITLE OF INVENTION: CRYSTAL-GROWING FURNACE, IN PARTICULAR A VERTICAL BRIDGMAN CRYSTAL-GROWING FURNACE OR A VERTICAL GRADIENT FREEZE CRYSTAL-GROWING FURNACE HAVING A JACKET HEATER AND A METHOD OF REGULATING THE HEAT OUTPUT OF THE JACKET HEATER

| APPLN. TYPE | SMALL ENTITY | ISSUE FEE DUE | PUBLICATION FEE DUE | PREV. PAID ISSUE FEE | TOTAL FEE(S) DUE | DATE DUE |
|----------------|--------------|---------------|---------------------|----------------------|------------------|------------|
| nonprovisional | NO | \$1400 | \$300 | \$0 | \$1700 | 04/16/2007 |

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

- A. If the status is the same, pay the TOTAL FEE(S) DUE shown above
- B. If the status above is to be removed, check box 5b on Part B Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

- A. Pay TOTAL FEE(S) DUE shown above, or
- B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.
- II. PART B FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.
- III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail Mail Stop ISSUE FEE

Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 or <u>Fax</u> (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where

| appropriate. All further indicated unless correcte maintenance fee notificat | correspondence includired below or directed others. | ng the Patent nerwise in B | d, advance of lock 1, by (a | rders and notification a) specifying a new c | of m | aintenance fees woondence address; | vill be and/or | mailed to the current (b) indicating a sepa | correspondence address as rate "FEE ADDRESS" for |
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| 23859 NEEDLE & RO | 7590 ' 01/16 DSENBERG, P.C | | | | | Cerr | tificate | of Mailing or Transr | nission |
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| ATLANTA, GA | 30309-3915 | | | | | | _ | · · · · | (Depositor's name) |
| | | | | | - | | | | (Signature) |
| | | | | | <u> </u> | | | | (Date) |
| APPLICATION NO. | FILING DATE | | | FIRST NAMED INVEN | TOR | | ATTO | RNEY DOCKET NO. | CONFIRMATION NO. |
| 10/650,240 | 08/27/2003 | | | Andreas Muhe | | | | 9232.0011U1 | 6388 |
| FITLE OF INVENTION VERTICAL GRADIENT HEAT OUTPUT OF THE | FREEZE CRYSTAL- | | | | | | | | |
| APPLN, TYPE | SMALL ENTITY | ISSUE F | EE DUE | PUBLICATION FEE D | UE | PREV. PAID ISSUE | E FEE | TOTAL FEE(S) DUE | DATE DUE |
| nonprovisional | NO | \$14 | 100 | \$300 | | . \$0 | | \$1700 | 04/16/2007 |
| EXAMI | NER | ART | JNIT | CLASS-SUBCLASS | ;] | | | | |
| KUNEMUND, | ROBERT M . | 17 | 22 | 117-081000 | | | | | |
| 1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363). Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached. "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. Use of a Customer Number is required. | | | | (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to | | | | | |
| PLEASE NOTE: Unkerecordation as set forth (A) NAME OF ASSIG | in 37 CFR 3.11. Comp | fied below, letion of this | no assignee form is NO | data will appear on the Tasubstitute for filing (B) RESIDENCE: (C) | he par g an a | tent. If an assigne ssignment. and STATE OR C | OUNTI | RY) | ocument has been filed for |
| Please check the appropri | ate assignee category or | categories (v | vill not be pr | inted on the patent): | U | Individual U Co | rporatio | on or other private gro | up entity Government |
| | re submitted: o small entity discount p of Copies | | | A check is enclos Payment by credi The Director is he | ed. t card | . Form PTO-2038 | is attac | equired fee(s), any def | iciency, or credit any |
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| | Publication Fee (if requ | ired) will no | t he accenter | from anyone other th | | | | | e assignee or other party in |
| Authorized Signature _ | | | | | | Date | | | |
| Typed or printed name | | | | | | | | | |
| This collection of informa in application. Confidenti ubmitting the completed his form and/or suggestic 30x 1450, Alexandria, Vi | ation is required by 37 C ality is governed by 35 application form to the ons for reducing this bur reginia 22313-1450. DO 3-1450 | FR 1.311. Th U.S.C. 122 a USPTO. Tir den, should l NOT SEND | ne information of the control of the | on is required to obtain 1.14. This collection is depending upon the i c Chief Information O COMPLETED FORM | or re s estin ndivid fficer S TO | tain a benefit by the mated to take 12 m dual case. Any con , U.S. Patent and THIS ADDRESS | ne publi ninutes mments Fradem: . SEND | c which is to file (and to complete, including on the amount of tirr ark Office, U.S. Depa o TO: Commissioner fo | by the USPTO to process) g gathering, preparing, and the you require to complete rtment of Commerce, P.O. or Patents, P.O. Box 1450, |

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| 10/650,240 | 0 | 8/27/2003 | Andreas Muhe | 19232.0011U1 | 6388 |
| 23859 | 7590 | 01/16/2007 | | EXAM | INER |
| NEEDLE & R | OSENBE | RG. P.C. | | KUNEMUND | , ROBERT M |
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| 999 PEACHTRI | | = | | 1722 | |
| ATLANTA, GA | 30309-39 | 15 | | DATE MAILED: 01/16/200 | 7 |

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)

(application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 53 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 53 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.